

ORD, NHEERL evaluated the eight dispersants in cell based *in vitro* assays developed by NHEERL scientists. These included both an estrogen-responsive and an androgen-responsive reporter gene assay that evaluated the ability of a sample to impact estrogen or androgen signaling, respectively. Both of these assays are well-validated. In addition, the cytotoxic effect of the dispersants in each cell line was evaluated. These assays were all conducted in-house in the NHEERL-RTP lab.

#### NHEERL objectives

1. Determine if any of the eight dispersants displayed estrogenic, androgenic or antiandrogenic activity *in vitro* using three well validated cell assays.
2. Determine the dispersant concentration that induced cytotoxicity in the three cell lines using a quantitative assay of mitochondrial function and by microscopic examination of the morphology and viability of the three cell cultures.

Eight commercially available oil spill dispersants were obtained directly from the respective manufacturers. These included Corexit® 9500 (Nalco Inc., Sugarland TX), JD 2000™ (GlobeMark Resources Ltd., Atlanta, GA), DISPERSIT SPC 1000™ (U.S. Polychemical Corp., Chestnut Ridge, NY), Sea Brat #4 (Alabaster Corp., Pasadena, TX), Nokomis 3-AA (Mar-Len Supply, Inc., Hayward, CA), Nokomis 3-F4 (Mar-Len Supply, Inc., Hayward, CA), ZI-400 (Z.I. Chemicals, Los Angeles, CA) and SAF-RON GOLD (Sustainable Environmental Technologies, Inc., Mesa, AZ). All are liquid solutions